

Abstract Submitted  
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**Progress of the 2012 KSTAR experimental campaign**<sup>1</sup> YEONG-KOOK OH, W.C. KIM, S.G. LEE, J.Y. KIM, H.L. YANG, K.R. PARK, Y. CHU, M.K. PARK, Y.S. BAE, H.K. KIM, J.G. KWAK, National Fusion Research Institute, H. PARK, POSTECH, W.H. CHOE, KAIST, K.S. CHUNG, Hanyang U., Y.S. NA, Y.S. HWANG, Seoul National U., S.Y. IN, KAERI, M. WALKER, General Atomics, D. MUELLER, J. PARK, PPPL, J.W. AHN, ORNL, S.A. SABBAGH, Columbia U., S. ZOLETNIK, Wigner RCP, THE KSTAR TEAM — KSTAR device has been operated with a mission to explore the advanced physics and technologies at high performance steady-state plasma that are essential for ITER and fusion reactor development. The 2012 KSTAR campaign is conducted with experimental goals to extend H-mode over 10 sec at the plasma current in the level of 0.6 ~ 1 MA by adopting the real-time shaping control, to investigate physics issues including L- to H-mode transition and ELM mitigation, and to support various experiments proposed by domestic and international collaborators. The available heating power in 2012 is about 5.5 MW in total including 3.5 MW NBI, 1 MW ICRF, 1 MW ECH/CD, and 0.3 MW LHCD. The upgraded diagnostic systems are Thomson scattering system, BES, two ECEI, VUV spectrometer, imaging bolometer, and FIR interferometer. In this presentation, the progress of the KSTAR experiments will be described including the hardware upgrade and physics research results.

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